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## China, Peoples Republic of

### FAIRS Product Specific

### Maximum Levels of Contaminants in Foods

### 2006

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**Report Highlights:**

This is an UNOFFICIAL translation of a national standard of China on Maximum Levels of Contaminants in Foods that was published on January 25, 2005 and went into force as of October 1, 2005 with a grace period of one year. Exporters should discuss the regulation with their importers carefully to ensure their interpretation is accurate and their exports are in compliance.

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Includes PSD Changes: No  
Includes Trade Matrix: No  
Unscheduled Report  
Beijing [CH1]  
[CH]

**Executive Summary**

The Ministry of Health (MOH) and the Standardization Administration of China (SAC) issued a national standard on Maximum Levels of Contaminants in Foods on January 25, 2005. The standard combines and replaces 13 hygienic standards for chemical contaminants. Most standard requirements for these contaminants are adjusted to comply with Codex Alimentarius Committee standards except where a Codex standard is absent.

Some existing standards were consolidated into this standard. The following are some of major changes when compared with the previous standards.

- Change the target substances for some items as in Polychlorobiphenyls (PCBs)
- Eliminate some food categories in which arsenic limits were set and add maximum levels of arsenic in sugar, edible oil, fruit juice, and fruit pulps.

China notified the WTO of these SPS measures in October 2003 to solicit comments from trade partners. The US government has made comments to these measures.

The standard takes effect as of October 1, 2005 with a grace period of one year. In other words, foods produced before October 1, 2005 that comply with relevant standards are allowed to be sold until September 30, 2006.

Because some of China's maximum residue limits (MRL) are not addressed in Codex guidelines and are lower than U.S. standards (where they exist) or levels considered safe for U.S. food produced for domestic consumption, these MRL's may affect U.S. exports. The MRLs for arsenic and nitrite may be of concern to the U.S. meat industry and selenium may be of concern for the some grains.

BEGIN TRANSLATION:

National Standard Of the People's Republic Of China

GB 2762—2005 (replaces GB 2762—1994, GB 4809—1984, etc)

**Maximum Levels Of Contaminants In Foods**

Issued on January 25, 2005

Implemented on October 1, 2005

Issued by the Ministry of Hygienic and the Standardization Administration of China

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## Preface

### **The whole text of this standard is mandatory.**

This Standard replaces and nullifies GB 14935—1994 Hygienic standard on Maximum Levels of Lead in Foods, GB 15201—1994 Hygienic Standard on Maximum Levels of Cadmium in Foods, GB 2762—1994 Hygienic Standard on Maximum Levels of Mercury in Foods, GB 4810—1994 Hygienic Standard on Maximum Levels of Arsenic in Foods, GB 14961—1994 Hygienic Standard on Maximum Levels of Chromium in Foods, GB 15202—2003 Hygienic Standard on Maximum Levels of Lead in Flour-origin Foods, GB 13105—1991 Hygienic Standard on Maximum Levels of Selenium in Foods, GB 4809—1984 Standard on Maximum Levels of Fluorine in Foods, GB 7104—1994 Hygienic Standard on Maximum Levels of Benzo(a)pyrene in Foods, GB 9677—1998 Hygienic Standard on Maximum Levels of N-nitrosamine in Foods, GB 9674—1988 Hygienic Standard on Maximum Levels of Polychlorobiphenyls (PCBs) in Sea Food, GB 15198—1994 Hygienic Standard on Maximum Levels of Nitrite in Foods, GB 13107—1991 Hygienic Standard on Maximum Levels of Rare Earth in Plant-origin Foods.

Compared with the previous standards on single item, this Standard has made the following changes:

- Modifications are made to the standard text format according to GB/T 1.1-2000;
- This Standard combines 13 standards regarding maximum levels of contaminants, such as GB 14935—1994 and GB 15201—1994;
- Modifications are made to food types and indicator levels based on hazard assessment and with reference to CAC standards;
- In some items, changes have been made to the target materials. For example, in relation to the indicators of maximum levels setting PCB1 and PCB5 as target materials in the area of Polychlorobiphenyls (PCBs) as stipulated in GB 9674—1988, the current Standard uses the combined total of PCB28, PCB52, PCB101, PCB118, PCB138, PCB153 and PCB180, added with PCB138 and PCB153 as indicators of maximum levels;
- CAC standards are adopted as equivalents, eliminate some food categories involving gross arsenic as stipulated in GB 4810—1994, add maximum levels for five food categories, such as sugar, food fats, fruit juice and fruit pulps, and cocoa products.

The Standard takes effect as of October 1, 2005, with a grace period of one year. In other words, products that are made before October 1, 2005 and compliant with relevant standards will be allowed on the market until September 30, 2006.

The Appendix A to the Standard is a referential appendix.

The Ministry of Health of the People's Republic of China proposes and administers this Standard.

Drafting institutions of the standard include: the Nutrition & Food Safety Institute under China Center for Disease Prevention & Control and the National Center for Health Inspection.

Main drafters: Wu Yongning, Wang xuqing, Yang Huifen and Zhao Danyu.

Refer to Appendix A for other drafters of this Standard.

The publication history of the previous standards replaced by this standard is as follows:

—GBn52-1977, GB 2762-1981, GB 2762-1994;

—GB 4809-1984;

—GB 4810-1984; GB 4810-1994;

—GB 9677-1988; GB 9677-1998;

—GB13105-1991;

—GB13107-1991;

—GB14935-1994

—GB14961-1994;

—GB15198-1994;

—GBn238-1984; GB15201-1994;

—GB 15202- 1994; GB15202 - 2003

## Maximum Levels Of Contaminants In Foods

### 1. Scope

The Standard stipulates the indicators of maximum levels of contaminants in foods. The Standard is applicable to all types of food.

### 2. Normative references

The clauses in the following referenced documents have been cited and become part of this standard. For documents with dates, their subsequent modifications (excluding error corrections) or revised versions are not applicable to the Standard. All parties having reached an agreement based on this Standard are encouraged to discuss whether the latest versions of these documents can be applied. For those documents without dates, their latest versions are applicable to this Standard.

GB/T 5009.11 Determination of Gross Arsenic and Inorganic Arsenic in Foods

GB/T 5009.12 Determination of Lead in Foods

GB/T 5009.15 Determination of Cadmium in Foods

GB/T 5009.17 Determination of Total Mercury and Organic Mercury in Foods

GB/T 5009.18 Determination of Fluorine in Foods

GB/T 5009.26 Determination of N-nitrosamines in Foods

GB/T 5009.27 Determination of Benzo(a)pyrene in Foods

GB/T 5009.33 Determination of Nitrite and Nitrate in Foods

GB/T 5009.93 Determination of Selenium in Foods

GB/T 5009.94 Determination of Rare Earth in Plant-origin Foods

GB/T 5009.123 Determination of Chromium in Foods

GB/T 5009.182 Determination of Aluminum in Flour-origin Foods

GB/T 5009.190 Determination of Polychlorobiphenyls (PCBs) in Foods

### 3. Terms and Definitions

The following terms and definitions are applicable to the Standard.

#### 3.1 Contaminant

Contaminant refers to any materials unintentionally added into the foods during the production (including planting crops, raising animals and applying veterinary medicines), processing, packaging, storage, transportation, sales, consumption of foods or any materials resulting from environmental pollution, including those other than fertilizers, veterinary medicines and toxins in fungi.

#### 3.2 Maximum levels, MLs

The maximum density of contaminants allowed in foods.

### 4 Requirements of Indicators

#### 4.1 Lead

4.1.1 See Table 1 for indicators of maximum levels of lead in foods

**Table 1. Indicators of Maximum Levels of Lead in Foods**

Food	Maximum level (MLs)/(mg/kg)
Cereal	0.2
Pulses	0.2
Potato products	0.2
Meat	0.2
Edible animal offal	0.5

Fish	0.5
Fruits	0.1
Fruitlet, Berries, Grapes	0.2
Vegetables (excluding stem, leaves and edible mushrooms)	0.1
Stem vegetables	0.3
Leaf vegetables	0.3
Fresh milk	0.05
Infant formula (Use milk as raw materials, measured by fluid milk diluted from powder)	0.02
Fresh eggs	0.2
Wine	0.2
Fruit juice	0.05
Tea	5

4.1.2 Testing method: determined as stipulated in GB/T 5009.12

#### 4.2 Cadmium

4.2.1 See Table 2 for indicators of maximum levels of cadmium in foods

**Table 2 Indicators of Maximum Levels of Cadmium in Foods**

Food	Maximum level (MLs)/(mg/kg)
Grains	
Rice, Soybeans	0.2
Peanuts	0.5
Flour	0.1
Course grains (maize, millet, sorghum, potatoes)	0.1
Animal meat	0.1
Animal liver	0.5
Animal kidney	1.0
Fruit	0.05
Stem vegetables (excluding celery)	0.1
Leaf vegetables, celery, edible mushrooms	0.2
Other vegetables	0.05
Fish	0.1
Fresh eggs	0.05

4.2.2 Testing method: determined as stipulated in GB/T 5009.15.

#### 4.3 Mercury

See Table 3 for indicators of maximum levels of mercury in foods

**Table 3 Indicators of Maximum Levels of Mercury in Foods**

Food	Maximum level (MLs)/(mg/kg)	
	Total mercury (Hg)	Methyl mercury
Grains (finished grains)	0.02	-
Potato products (Potato, sweet potato), vegetables, fruit	0.01	-
Fresh milk	0.01	-
Meat, eggs (shelled)	0.05	-
Fish (excluding carnivore fish) and other aquatic products	-	0.5

Carnivore fish (e.g. shark, tuna or other fish)	-	1.0
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4.3.2 Testing method: determined as stipulated in GB/T 5009.17.

#### 4.4 Arsenic

4.4.1 See Table 4 for indicators of maximum levels of Arsenic in foods

**Table 4 Indicators of Maximum Levels of Arsenic in Foods**

Food	Maximum level (MLs)/(mg/kg)	
	Total arsenic	Inorganic arsenic
Grains		
Rice	-	0.15
Flour	-	0.1
Course grains	-	0.2
Vegetables	-	0.05
Fruit	-	0.05
Meat	-	0.05
Egg	-	0.05
Milk powder	-	0.25
Fresh milk	-	0.05
Pulses	-	0.1
Liquor	-	0.05
Fish	-	0.1
Algae (dry weight)	-	1.5
Shells, shrimps and crabs (fresh weight)	-	0.5
Shells, shrimps and crabs (dry weight)	-	1.0
Other aquatic foods (fresh weight)	-	0.5
Edible fats	0.1	-
Fruit juice and pulp	0.2	-
Coco butter and chocolate	0.5	-
Other coco products	1.0	-
Sugar	0.5	-

4.4.2 Testing method: determined as stipulated in GB/T 5009.11.

#### 4.5 Chromium

4.5.1 See Table 5 for indicators of maximum levels of chromium in foods

**Table 5 Indicators of Maximum Levels of Chromium in Foods**

Food	Maximum level (MLs)/(mg/kg)
Grains	1.0
Pulses	1.0
Potato products	0.5
Vegetables	0.5
Fruit	0.5
Meat (including liver, kidney)	1.0
Fish and shells	2.0
Eggs	1.0
Fresh milk	0.3
Milk powder	2.0

4.5.2 Testing method: determined as stipulated in GB/T 5009.123.

#### 4.6 Aluminium

4.6.1 See Table 6 for indicators of maximum levels of aluminum in foods

**Table 6 Indicators of Maximum Levels of Aluminum in Foods**

Food	Maximum level (MLs)/(mg/kg)
Flour foods (quantity)	100

4.6.2 Testing method: determined as stipulated in GB/T 5009.182.

#### 4.7 Selenium

4.7.1 See Table 7 for indicators of maximum levels of selenium in foods

**Table 7 Indicators of Maximum Levels of Selenium in Foods**

Food	Maximum level (MLs)/(mg/kg)
Grains (finished grains)	0.3
Pulses and their products	0.3
Vegetables	0.1
Fruit	0.05
Meat	0.5
Kidney	3.0
Fish	1.0
Eggs	0.5
Fresh milk	0.03
Milk powder	0.15

4.7.2 Testing method: determined as stipulated in GB/T 5009.93.

#### 4.8 Fluorine

4.8.1 See Table 8 for indicators of maximum levels of fluorine in foods

**Table 8 Indicators of Maximum Levels of Fluorine in Foods**

Food	Maximum Levels (MLs)/(mg/kg)
Grain	
Rice, flour	1.0
Other	1.5
Pulses	1.0
Vegetables	1.0
Fruit	0.5
Meat	2.0
Fish (fresh water)	2.0
Eggs	1.0

4.8.2 Testing method: determined as stipulated in GB/T 5009.18

#### 4.9 Benzo(a)pyrene

4.9.1 See Table 9 for indicators of maximum levels of benzo(a)pyrene in foods

**Table 9 Indicators of Maximum Levels of Benzo(a)pyrene in Foods**

Food	Maximum Levels (MLs)/(µg/kg)
Roasted (smoked) meat	5
Vegetable oil	10
Grain	5

4.9.2 Testing method: determined as stipulated in GB/T 5009.27

#### 4.10 N-nitrosamine

4.10.1 See Table 10 for indicators of maximum levels of N-nitrosamine in foods

**Table 10 Indicators of Maximum Levels of N-nitrosamine in Foods**

Food	Maximum Levels (MLs)/(µg/kg)
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	N-nitrosodimethylamine	N-diethylnitrosamine
Sea food	4	7
Grain	3	5

4.10.2 Testing method: determined as stipulated in GB/T 5009.26

#### 4.11 Polychlorobiphenyls (PCBs)

4.11.1 See Table 11 for indicators of maximum levels of Polychlorobiphenyls (PCBs) (PCBs) in foods

Food	Maximum Levels (MLs)/(mg/kg)		
	Polychlorobiphenyls (PCBs) <sup>a</sup>	PCB138	PCB153
Sea fish, shells, shrimps, and algae (edible part)	2.0	0.5	0.5
<sup>a</sup> Measured as total PCB28, PCB52, PCB101, PCB118, PCB138, PCB153 and PCB180 combined.			

4.11.2 Testing method: determined as stipulated in GB/T 5009.190

#### 4.12 Nitrite

4.12.1 See Table 12 for indicators of maximum levels of nitrite in foods

**Table 12 Indicators of Maximum Levels of Nitrite in Foods**

Food	Maximum level (MLs) ( $N_2NO_2$ )/(mg/kg)
Grains (rice, flour, maize)	3
Vegetables	4
Fish	3
Meat	3
Eggs	5
Pickles	20
Milk powder	2
Table salt	2

4.12.2 Testing method: determined as stipulated in GB/T 5009.33.

#### 4.13 Rare earth

4.13.1 See Table 13 for indicators of maximum levels of rare earth in foods

**Table 7 Indicators of Maximum Levels of Selenium in Foods**

Food	Maximum level <sup>a</sup> (MLs)/(mg/kg)
Grains Paddy, maize, wheat	2.0
Vegetables (excluding spinach)	0.7
Fruit	0.7
Peanut kernels	0.5
Potatoes	0.5
Green beans	1.0
Tea	2.0
<sup>a</sup> Measured by total amount of rare earth oxide	

4.13.2 Testing method: determined as stipulated in GB/T 5009.94.

**Appendix A**

(Documentary appendix)

**General Table of Other Drafting Institutions and Drafters of the Standard****Table A.1 General Table of Other Drafting Institutions and Drafters of the Standard**

No.	Contaminant	Drafting Institution	Drafter
1	Lead	Shanghai Municipal Center for Disease Control & Prevention, Institute of Nutrition and Food Safety of China CDC, Zhejiang Association of Medical Sciences	Wu Qile, Wang Weixian, Gu Weiqin, Huxin, Suyan
2	Cadmium	Shanghai Municipal Center for Disease Control & Prevention, Institute of Nutrition and Food Safety of China CDC, West China University of Medical Sciences	Wu Qile, Hanchi, Yang Huifen, Wang Weizhou, Gu Weiqin, Tian Shuibi
3	Mercury	Institute of Nutrition and Food Safety of China CDC, Shanghai Municipal Center for Disease Control & Prevention, Jiangsu Sanitation and Epidemic Prevention Station, Guangdong Center for Disease Control & Prevention	Yang Huifen, Shenwen, Zou Zongfu, Jin Chuanyu, Liang Chunhui
4	Arsenic	Institute of Nutrition and Food Safety of China CDC, West China University of Medical Sciences, Shangdong Sanitation and Epidemic Prevention Station, Hebei Sanitation and Epidemic Prevention Station, Guangdong Sanitation and Epidemic Prevention Station, Jiangsu Center for Disease Control & Prevention, Anhui Sanitation and Epidemic Prevention Station, Jilin Sanitation and Epidemic Prevention Station, Zhejiang Ningbo Sanitation and Epidemic Prevention Station, Hubei Shiyan Sanitation and Epidemic Prevention Station, Liaoning Sanitation Supervision Station	Yang Huifen, Wang Weizhou, Tian Shuibi, Lu Binzhen, Xing June, Liang Chunhui, Cang Gongao, Shi Hongjing, Bianjiang, Jiangli, Wang Yaocheng, Wangzheng
5	Chromium	Qingdao Medical College, Institute of Nutrition and Food Safety of China CDC	Li Juesheng, Zhang Xiuzhen, Wang Weizhou, Gao Junquan, Zhang Xinmian
6	Aluminium	Institute of Nutrition and Food Safety of China CDC, Shanghai Municipal Center for Disease Control & Prevention, Guangdong Center for Disease Control & Prevention, Hunan Center for Disease Control & Prevention, West China University of Medical Sciences, Chengdu Sanitation and Epidemic Prevention Station, Tianjin Public Sanitation Supervision Center	Su Dezhaoh, Wanglin, Wang Yongfang, Wang Xuliao, Yang Huifen, Zhao Danyu, Wangzhi

7	Selenium	Institute of Nutrition and Food Safety of China CDC	Wang Weizhou, Yang Guangqi, Hanchi
8	Fluorine	Institute of Nutrition and Food Safety of China CDC	Wang Weizhou
9	Benzo(a)pyrene	Sanitation and Epidemic Prevention Station of Guangxi Zhuang Autonomous Region, Institute of Nutrition and Food Safety of China CDC	Chifeng, Wang Weizhou
10	N-nitrosamine	Institute of Nutrition and Food Safety of China CDC, School of Public Hygienic of Beijing Medical University, Fujian Sanitation and Epidemic Prevention Station	Gao Junquan, Song Puju, Wang Weizhou, Lin Shengqing, Cai Yixin
11	Polychlorobiphenyls (PCBs)	Institute of Nutrition and Food Safety of China CDC	Wu Yongning
12	Nitrite	Institute of Nutrition and Food Safety of China CDC, Henan Center for Disease Control & Prevention, Jilin Sanitation and Epidemic Prevention Station, Helongjiang Center for Disease Control & Prevention, Qingdao Medical College	Yang Huifen, Wang Weizhou, Zhang Xiuzhen, Wang Jinfeng, Luo Yanfei
13	Rare earth	Institute of Nutrition and Food Safety of China CDC, Liaoning Center for Disease Control & Prevention, Hunan Sanitation and Epidemic Prevention Station, Shanghai Municipal Center for Disease Control & Prevention, Fuzhou Sanitation and Epidemic Prevention Station	Su Dezhaoh, Zhai Yongxin, Xiang Liangdi, Shenwen, Sun Xiuqin

END TRANSLATION